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ANNUAL REPORTS

OF THE

Academy of Natural Sciences

OF

PHILADELPHIA.

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# 1904



The following reports were ordered to be printed:

# REPORT OF THE RECORDING SECRETARY.

Sixteen meetings have been held during the year, on the first and third Tuesdays from October to May inclusive, with an average attendance of thirty-six. Verbal communications were made by Messrs. A. E. Brown, Sharp, Keeley, Calvert, Chapman, Pilsbry, Fowler, Stone, Borden, Goodspeed, Phillips, Conklin, Nelson, Willcox, S. Brown, Moore, Wetherill, Miss Wardle and Miss Keller.

Fifty-two papers were presented for publication, as follows: James A. G. Rehn, 7; Henry W. Fowler, 4; Henry A. Pilsbry, 4; J. Percy Moore, 4; Thomas H. Montgomery, Jr., 2; T. D. A. Cockerell, 2; Henry C. Chapman, 2; J. A. G. Rehn and Morgan Hebard, 1; Nathan Banks, 1; N. M. Stevens, 1; Addison Gulick, 1; Harold Heath, 1; Thomas L. Casey, 1; James A. Nelson, 1; Harry C. Oberholzer, 1; A. E. Brown, 1; John H. Harshberger, 1; Benjamin Sharp and H. W. Fowler, 1; M. F. Thompson, 1; William F. Allen, 1; David H. Tennant, 1; Sarah P. Monks, 1; Witmer Stone, 1; Witmer Stone and A. S. Bunnell, 1; H. A. Pilsbry and E. Vanatta, 1; H. A. Pilsbry and Y. Hirase, 1; R. W. Shufeldt, 1; Mary H. Greenwalt, 1; Adele M. Fielde, 1; Adele M. Fielde and G. H. Parker, 1; Everett F. Phillips, 1; R. V. Chamberlin, 1; Charles W. Johnson, 1; Albert M. Reese, 1.

One of these, Fowler's *Fishes of Sumatra*, forms the concluding number of Volume XII of the *Journal*, six were returned to the authors, two were transferred to the Entomological Section, one is held under consideration, four have been accepted for publication in the volume for 1905, and the others constitute the current volume of the *Proceedings*.

A paper by Edward G. Conklin, Ph.D., entitled *The Organization and Cell-Lineage of the Ascidian Egg*, to form the first number of the *Journal*, Volume XIII, is going through the press, and will be ready for publication as soon as five of the plates in color, now being prepared in Germany, are received.

Eight hundred and ninety-five pages of the *Proceedings* and 59 plates, 70 pages and 22 plates of the *Journal*, 352 pages and 20 plates of the *Entomological News*, 299 pages and 20 plates of the *Transactions of the American Entomological Society* (Entomological Section of the

Academy), and 353 pages illustrated by 60 plates of the *Manual of Conchology* have been published.

The issues of the *Proceedings* and *Journal* have been distributed as follows:

PROCEEDINGS, delivered to members, . . . . .	498
“        exchanged, . . . . .	560
“        to subscribers, . . . . .	40
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	1,098
JOURNAL, exchanged, . . . . .	72
“        to subscribers, . . . . .	34
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	106

The decrease in the number of copies of the *Proceedings* sent out is due to a careful revision of the Exchange List, those societies being dropped, after due notification, from whom it is unlikely that a return will be received.

Sixteen members and two correspondents have been elected. The deaths of sixteen members and four correspondents have been announced. The following have resigned their membership: William J. Scott, Norris J. Scott, H. B. Gross, O. S. Paxson, William D. Joyce, William R. Reineck, C. M. Thomas and H. H. Furness.

In consequence of a decrease in the membership of the Conchological Section it ceased to exist in March, and the publication of the *Manual of Conchology*, the property of the Section since the death of the first editor, Mr. George W. Tryon, Jr., has been assumed by the Academy. The work will be continued under the direction of Henry A. Pilsbry, Sc.D. Mr. S. Raymond Roberts, formerly Treasurer of the Conchological Section, has kindly consented to retain the financial administration of the *Manual*, and has reported on the receipts and expenditures since the dissolution of the Section.

Dr. Charles B. Penrose was elected a member of the Council to fill the vacancy caused by the absence of Mr. Charles H. Cramp.

The resignation of Mr. Harold Wingate from the Committee on Accounts, because of removal from the city, was accepted.

The meetings of a number of related societies continue to be held in the rooms of the Academy.

I desire to acknowledge my obligation to Mr. William J. Fox for most efficient assistance in the preparation and distribution of the publications and in other matters connected with my office.

EDWARD J. NOLAN,  
Recording Secretary.

## REPORT OF THE CORRESPONDING SECRETARY.

During the past year, as usual, the bulk of the correspondence with scientific societies and institutions was concerned with the exchange of periodical publications, the number of which acknowledged shows a material increase. Several proposals to exchange publications were referred to the Publication Committee, and requests for the loan of collections or offers of specimens to the Curators.

The year has been noteworthy for the number of deaths of prominent scientific men and for the importance of its international congresses of learning. Formal notices of no fewer than eight deaths of Presidents of societies and Directors of museums were received and duly acknowledged in letters of condolence.

Invitations to the Academy to participate were received from the Organizing Committees of four international congresses, but in each case, beyond an expression of interest, no formal action was taken by the Academy and no delegates were appointed.

The deaths of four distinguished correspondents—Karl A. Zittel, Henry M. Stanley, R. A. Phillippi and Eduard von Martens—occurred during the year and were announced from the Chair. In the election of Profs. A. A. W. Hubrecht, of Utrecht, and Frantisek Vejdovsky, of Prag, the high standard of scientific attainment now required by the Academy as a condition of corresponding membership is maintained. Fourteen correspondents have contributed their photographs, accompanied in most cases by biographical sketches.

Following are the statistics of the year's correspondence:

## COMMUNICATIONS RECEIVED.

Acknowledging the Academy's publications, . . . . .	197
Transmitting publications, . . . . .	71
Requesting exchanges and the supply of deficiencies, . . . . .	7
Invitations and notices, . . . . .	6
Announcements of deaths of scientific men, . . . . .	8
Circulars concerning the administration of scientific institutions, etc., . . . . .	11
Photographs and biographies of Correspondents, . . . . .	14
Letters from Correspondents, . . . . .	13
Miscellaneous letters, . . . . .	35
Total received, . . . . .	362

## COMMUNICATIONS FORWARDED.

Acknowledging gifts to the Library, . . . . .	877
Acknowledging gifts to the Museum, . . . . .	77

Acknowledging photographs, . . . . .	14
Requesting the supply of deficiencies, . . . . .	50
Correspondents' diplomas and notices of election, . . . . .	3
Letters of sympathy and congratulation, . . . . .	10
Letters to Correspondents, . . . . .	23
Miscellaneous letters, . . . . .	36
Copies of Annual Reports, . . . . .	262
Total forwarded, . . . . .	1,352

Respectfully submitted,

J. PERCY MOORE,  
*Corresponding Secretary.*

### REPORT OF THE LIBRARIAN.

Six thousand three hundred and ninety-two additions were made to the Library during the past year. Of these 5,078 were pamphlets and parts of periodicals, 1,066 were volumes. There were, in addition, 181 photographs, drawings, etc., and 67 maps. They were derived from the following sources:

Societies, Museums, etc.....	2,261	Ministère des Travaux Publics,	
I. V. Williamson Fund.....	1,890	France.....	13
Editors.....	684	Clarence B. Moore.....	12
General Fund.....	372	Sveriges Geologiska Undersök-	
Authors.....	176	ning.....	11
Mrs. M. T. S. Schaeffer.....	169	National Committee of Audubon	
United States Department of		Societies.....	11
Agriculture.....	102	Ministerio de Fomento, Peru.....	10
J. A. Meigs Fund.....	94	Geological Survey of India.....	10
Manuel E. Griffith.....	76	H. A. Pilsbry.....	10
Wilson Fund.....	66	William J. Fox.....	9
United States Department of		United States Department of	
Interior.....	65	State.....	8
Daniel D. Berolzheimer.....	51	Department of Agriculture, Cape	
Comité Géologique Russe.....	27	of Good Hope.....	7
Imperial Geological Survey of		Secretario de Estado, Mexico.....	7
Japan.....	24	Government of India.....	7
Horatio C. Wood, M.D.....	20	Department of Mines, Victoria....	6
University of Chicago.....	17	Pennsylvania State Library.....	6
Paul Hagemans.....	14	Estate of James G. Meigs.....	6
Thomas Biddle, M.D.....	14	H. C. Chapman, M.D.....	5
Trustees of British Museum.....	14	Albert I, of Monaco.....	5
Geological Survey of Canada.....	14	Department of the Interior, Can-	
Pennsylvania Department of		ada.....	5
Agriculture.....	13	Library of Congress.....	4



United States Department of Commerce and Labor.....	4	United States Coast and Geodetic Survey.....	1
United States Treasury Depart- ment.....	4	Bureau of American Ethnology..	1
Conchological Section, Academy..	4	J. A. G. Rehn.....	1
Department of Mines, New South Wales.....	4	Botanical Garden, Kew.....	1
United States War Department..	3	Howard Crawley.....	1
Botanical Survey of India.....	3	S. Raymond Roberts.....	1
Instituto Geologico de Mexico.....	3	P. P. Calvert, Ph.D.....	1
Wisconsin Geological and Nat- ural History Survey.....	3	Department of Public Gardens, etc., Jamaica.....	1
Kommission zur Wissenschaft- lichen Untersuchungen der Deutschen Meere in Kiel.....	3	Martin I. J. Griffin.....	1
Edward Potts.....	3	Museo Nacional de Mexico.....	1
United States Commission of Fish and Fisheries.....	2	Dr. H. Burgin.....	1
Alfred Sharpless.....	2	F. J. Keeley.....	1
Trustees, Bernice Pauahi Bishop Museum.....	2	Philippine Government Board in the United States .....	1
Royal Society.....	2	Norske Gradmalingskommission..	1
Vlaamsch Natuur-en Genesskun- dig Congres.....	2	Geological Survey of Alabama.....	1
Geological Survey of New Jersey..	2	Free Public Museum, Liverpool..	1
Monsieur le Duc de Loubat.....	2	R. Accademia Petrarca di Arezzo	1
Danish Government.....	2	Miss A. R. Murphy.....	1
Department of Geology and Nat- ural History, Indiana.....	2	Home Secretary's Office, Queens- land.....	1
Bureau of Geology and Mines, Missouri.....	2	Council of the Fridtjof Nansen Fund for the Advancement of Science.....	1
		Surveyor General's Department, Natal.....	1
		Philippine Weather Bureau.....	1
		Iowa Geological Survey.....	1

They have been assigned to the following departments of the Library:

Journals.....	4,738	Geography.....	36
Botany.....	466	Bibliography.....	27
Geology.....	330	Mineralogy.....	17
General Natural History.....	134	Helminthology.....	17
Ornithology.....	83	Physical Science.....	12
Ichthyology.....	76	Herpetology.....	9
Voyages and Travels.....	71	Chemistry.....	6
Entomology.....	70	Medicine.....	4
Agriculture.....	67	Encyclopedias.....	4
Anatomy and Physiology.....	52	Philology.....	3
Conchology.....	47	Mathematics.....	2
Mammalogy.....	46	Unclassified.....	22
Anthropology.....	43		

Shelf-lists of the special departments of the Library were compiled in 1885, 1886 and 1887. A careful comparison of the books on the

shelves with these lists leaves nineteen works unaccounted for. With the exception of two volumes of bound pamphlets and four of somewhat antiquarian interest, they are recent works of small pecuniary value which can readily be replaced.

That a like account of stock may be taken of the journals and periodicals it will be necessary that a similar shelf-list be made of this department. This will be a work of some magnitude and of undoubted importance. It is hoped that it may be accomplished next year.

Ten hundred and twenty-six volumes have been bound, and 72 maps trimmed, backed with linen and added to the collection.

A collection of twenty-six catalogues, announcements, etc., issued by the University of Athens, were transferred to the library of the University of Pennsylvania; 3 volumes and 13 pamphlets on theology to the Seminary of St. Charles Borromeo, 19 volumes and 175 pamphlets on miscellaneous literature to the Free Library of Philadelphia. An accumulation of 103 State documents, in no way related to the Academy's work, were returned to Harrisburg.

A set of fine mahogany cases, formerly containing the library of the late Dr. Charles Schaeffer, has been presented to the Academy by Mrs. Schaeffer. They have been placed in the Council room, replacing those received in 1895 with the Meigs library, and greatly improve the appearance of the apartment.

As heretofore, I am glad to acknowledge the intelligent service of my assistant, Mr. William J. Fox, in all departments of the library work.

EDWARD J. NOLAN,  
*Librarian.*

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#### REPORT OF THE CURATORS.

The collections in the care of the Curators are in an excellent state of preservation, with all the data carefully recorded. During the past year important progress has been made in the details of arrangement and identification.

Additions and alterations to the heating plant have permitted the heating of the Museum. Many needed repairs have been made to the roof and other parts of the building.

Additional window-shades have been placed in the Museum and in the alcoholic department to protect the specimens from the light.

The Council room has been completely renovated and handsomely

furnished with mahogany book cases, the gift of Mrs. Charles Schaeffer, who has likewise presented a lantern and screen.

The grounds adjoining the Museum have been sown with grass and carefully tended during the year, greatly improving their appearance.

In the Museum the installation of plate glass and mahogany cases has continued, 3,500 cubic feet of exhibition space having been provided during the year for mammals, birds and invertebrates. An oak wall-case has been placed in the Archæological department and the woodwork of most of the old cases has been refinished. Numerous storage cases for birds, mammals, insects, plants and mollusks have been purchased.

Through the liberality of Mr. Clarence B. Moore, Messrs. Stewardson Brown and H. W. Fowler were sent on a six-weeks' trip to the southwestern Florida keys in search of specimens of *Liguus* to supplement a valuable series collected and presented by Mr. Moore from the eastern and western coasts and adjacent keys. Though unsuccessful in its immediate object, the expedition obtained valuable collections of fishes, plants, etc. Later Mr. Moore sent out a second expedition, securing a series of the desired mollusks.

Dr. H. A. Pilsbry spent two months in Cuba investigating the molluscan fauna in the interests of the Academy, and Mr. J. A. G. Rehn was engaged for one month in collecting insects and birds in southern Georgia.

Mr. Clarence B. Moore has added a number of valuable specimens to his collection of Indian antiquities from Florida. Among other notable gifts of the year may be mentioned a large series of Indian implements, plants, birds and minerals, the collection of the late Dr. Charles Schaeffer, presented by Mrs. Schaeffer, a collection of ethnological material from Lieut. Frederick Schober, and numerous valuable specimens of mammals, birds and reptiles from the Zoological Society of Philadelphia. Several important collections have also been secured by purchase.

Besides the work detailed in the appended reports of the Sections, Mr. Fowler has continued the arrangement and identification of the fishes, and made numerous local collections.

Dr. Moore has cared for and added to the helminthological collection.

Dr. Pilsbry and Mr. Vanatta have made important advances in the identification and arrangement of the mollusca. The report of the Special Curator of this department is added.

Mr. Rehn has cleaned the greater part of the small mammal skulls belonging to the Rhoads and Bunnell collections, upward of 3,000 being thus added to the study series.

Mr. Stone, with the assistance of the Jessup students, has rearranged the entire series of reptiles and batrachians, relieving their overcrowded condition, and has labelled and tagged with metal numbers the entire series of Garter Snakes, as well as all recent accessions. Twelve thousand metal tags have been prepared and the work of tagging the whole collection will be pushed as rapidly as possible.

Miss H. N. Wardle has been constantly engaged in labelling, cataloguing and arranging the archæological collections, rendering them much more instructive to the student and visitor.

The preparator, Mr. McCadden, has mounted a number of mammals, notably an African Buffalo, and has prepared many specimens for the study collections.

Besides the services rendered by the Museum staff and the students of the Jessup Fund, the Curators are indebted to Dr. Philip P. Calvert, Mr. Erich Daecke, Mr. H. W. Wenzel, Mr. H. L. Viereck and Mr. E. T. Cresson, Jr., for assistance in the Entomological department.

The Anti-Tuberculosis Society, Philadelphia Botanical Club, Nomenclature Committee Botanical Club A. A. A. S., Mycological Club, Delaware Valley Ornithological Club, Pennsylvania Audubon Society and Delaware Valley Naturalists' Union have held meetings in the Academy building during the year.

The collections have been extensively studied by visiting specialists, while material has been loaned to the following: Robert Ridgway, H. C. Oberholser, G. S. Miller, Jr., E. B. Williamson, O. P. Hay, C. F. Sands, T. H. Montgomery, Jr., E. S. Steele, W. B. Scott, Florence Bascom, W. E. Meehan, James H. Lambert, J. F. Holt, C. V. Piper, E. L. Morris, W. B. Clarke, Paul Bartsch, J. W. Harshberger, Lawrence Bruner, H. W. Fowler, J. A. Allen and A. E. Ortman.

SAMUEL G. DIXON,  
*Curator.*

#### REPORT OF THE SPECIAL CURATOR OF THE DEPARTMENT OF MOLLUSCA.

The accessions to the collection of mollusks during 1904 have exceeded in number those of any year since the reception of the A. D. Brown collection in 1887. Specimens have been received from 78 sources, the most valuable or extensive being the following:

A series of 330 lots of shells from the keys and adjacent mainland of Florida, from Mr. Clarence B. Moore, part collected by his own party, part by others sent by him to collect mollusks. This is by far the most extensive series of mollusks ever obtained on the Florida

keys. The specimens have been determined and studied, and it is hoped that the results, suitably illustrated, will be published during the coming year.

A series of Japanese mollusks, some 650 lots, received from Mr. Y. Hirase, of Kyoto, has also been studied, but only the new forms have been published, comprising about 140 new species and about 30 new subspecies.

Mr. J. H. Ferriss has generously divided his valuable Arizona collections with us. The study of this material, with that collected by Mr. Ferriss and the Special Curator in 1903, is nearly complete. An unexpectedly large number of new and interesting forms were found.

Early in the year an attempt was made to increase our collection of fresh-water bivalves of the genus *Pisidium*. Some 70 lots were obtained from various correspondents, 10 of them cotypes and a large number of them topotypes. With the specimens already in our possession, these additions probably make our collection the most complete in existence.

A series of the mollusks of the Alabama river system, collected this year by Mr. H. H. Smith, has been purchased. It consists of about 17,000 specimens. These remain to be determined and installed.

During the spring the Special Curator explored a portion of central Cuba for mollusks, obtaining a collection of some 500 lots, about 10,000 specimens. This collection also remains to be studied.

The chief work in the Museum has been the revision of the African *Achatinidæ*. Much other work of correction and relabelling has been done in connection with studies on new material.

Four papers have been published in the *Proceedings* of the Academy by the Special Curator, one with Mr. Vanatta, and one in conjunction with Mr. Hirase, while ten have been published by the Special Curator in the *Nautilus*. These have chiefly dealt with the classification and description of new material.

The time of the Special Curator has been largely occupied, as hitherto, in the publication of the *Manual of Conchology*. The volume for this year treats of the African family *Achatinidæ*.

The efficient assistance of Mr. E. G. Vanatta in the work of the department throughout the year should be acknowledged.

H. A. PILSBRY,  
*Special Curator of the Department of Mollusca.*

## REPORTS OF THE SECTIONS.

## MINERALOGICAL AND GEOLOGICAL SECTION.

The Section has this year kept up its meetings and field excursions even more zealously than last year, with about double the number of communications, one-third larger attendance on the meetings, one-half more on the excursions, and an increase of more than one-quarter in membership.

There have been nine meetings, with an average attendance of over 11. Communications were made by Miss Emma Walter, on old stream-beds; by B. S. Lyman, on the immense time indicated by erosion; by Prof. B. L. Miller, on graphite occurring in Chester County, Pa.; by B. S. Lyman, on the Bechtel graphite mine, near Boyerstown, Berks County, Pennsylvania; by Miss Mary S. Holmes, on the Virginia Natural Bridge; by B. S. Lyman, on topography an aid to geology; by Miss Emma Walter, on clay near Saylorsburg, Monroe County, Pennsylvania; by Mr. F. J. Keeley, on the trap of Cape Ann, Massachusetts; by Miss Mary S. Holmes, on some problems suggested by the excursion along the Perkiomen; by Mr. T. Chalkley Palmer, on serpentines of Delaware County, Pennsylvania; by Mr. F. J. Keeley, on serpentines under the microscope; and about 20 shorter communications, besides various discussions.

There were 7 field excursions, with an average attendance of 43. The excursions visited: 1. The crystalline rocks and their minerals, particularly kaolin, between Hockessin, Delaware, and Kennett Square, Chester County, Pennsylvania; 2. The crystalline rocks near Glen Mills and Lenni, on Chester Creek, and at Mineral Hill, Delaware County, Pennsylvania; 3. The crystalline rocks near Avondale, Strath-Haven, Rose Valley and Media, Delaware County, Pennsylvania; 4. Portions of the New Red Perkasic shales and Pottstown shales and trap, from Lodel Creek to Spring Mountain, near the Perkiomen, and Schwenksville, Montgomery County, Pennsylvania; 5. Portions of the New Red Norristown shales and Gwynedd shales, and some of the gneiss southward, between Noble Station and Doylestown; 6. The crystalline rocks near Newtown Square, Delaware County, Pennsylvania; 7. The crystalline rocks between Newtown Square and Media, Delaware County, Pennsylvania.

The membership of the Section has increased by ten in all, namely, seven contributors and three members of the Academy, one of whom became a member through his interest in the Section. The Section

now contains 27 members of the Academy and 21 contributors, or 48 in all.

The following officers of the Section have been elected for the year 1905:

<i>Director</i> , . . . . .	Benjamin Smith Lyman.
<i>Vice-Director</i> , . . . . .	George Vaux, Jr.
<i>Recorder and Secretary</i> , . . . . .	Miss Mary S. Holmes.
<i>Treasurer</i> , . . . . .	Miss Emma Walter.
<i>Conservator</i> , . . . . .	Frank J. Keeley.

Respectfully submitted by order of the Section,

BENJ. SMITH LYMAN,  
*Director.*

#### THE BIOLOGICAL AND MICROSCOPICAL SECTION.

The numerical strength of the Section is the same as that of last year, two members having withdrawn and two having been admitted.

The interest in the regular sessions has been increased by the discussions at the informal meetings which have formed a pleasant feature of the year's work. Numerous communications have been made, among which may be especially mentioned those of Mr. F. J. Keeley on various accessories of microscopic manipulation; by Mr. T. C. Palmer on *Trachelomonas*; by Dr. D. E. Owen on dredgings in Saco Bay, and by Mr. Hugo Bilgram on *Myxomycetes*. Every member present has made an effort to offer at each meeting some object or subject which, if not new, has at least stimulated the work of others. A special topic which has occupied the attention of the Section is that of the microscopic structure of rocks.

The Conservator reports that the instruments belonging to the Section are in good working order, and the following additions have been made during the past year: One Zentmayer Portable Histological Stand, one Dissecting Microscope, one Beck Microscope Lamp, one Acme Microscope Lamp, one Balance, two large Slide Cabinets with Drawers, four small Slide Cabinets with Trays, some miscellaneous accessories and over 500 mounted slides, all presented by Mrs. Charles Shaeffer. One hundred and fifty-eight slides, prepared by L. Woolman, were presented by Mr. F. J. Keeley.

One Tolles  $\frac{1}{30}$ -inch Objective was purchased.

The officers elected for the following year are as follows:

<i>Director</i> , . . . . .	J. Cheston Morris, M.D.
<i>Vice-Director</i> , . . . . .	T. Chalkley Palmer.
<i>Conservator</i> , . . . . .	F. J. Keeley.
<i>Recorder</i> , . . . . .	C. S. Boyer.
<i>Corresponding Secretary</i> , . . . . .	S. L. Schumo.
<i>Treasurer</i> , . . . . .	Thomas S. Stewart, M.D.

CHARLES S. BOYER,  
*Recorder.*

#### THE ENTOMOLOGICAL SECTION.

Ten meetings were held with an average attendance of twelve persons. The communications made were of scientific interest, and have been published in the *Entomological News and Proceedings of the Entomological Section*. This journal has been continued and Volume XV completed with 352 pages and 20 plates. One hundred and five book or Schmitt boxes have been purchased, and three of the new tin pest-proof cases to hold them. Rearrangements have been made of portions of the collections and new material added by gift, purchase and exchange, to the number of over 7,000 specimens. The collection of Orthoptera has been increased by the presentation of nearly 500 specimens, the gift of Mr. Morgan Hebard. This order has also been enriched by the reception of over 700 specimens from Dr. Henri de Saussure, containing many genera and species new to the collection.

Valuable additions have been made to the cabinets by purchase, including 766 Orthoptera from Japan and the Loo Choo Islands; 274 Orthoptera from the Philippines; 1,000 Hymenoptera from Mexico; 342 Chilcan Orthoptera, and 2,000 insects from Georgia, collected for the Academy by Mr. J. A. G. Rehn.

Three associates have been elected, and at the annual meeting, held December 22, the following persons were elected officers to serve for 1905:

<i>Director</i> , . . . . .	Philip Laurent.
<i>Vice-Director</i> , . . . . .	H. W. Wenzel.
<i>Treasurer</i> , . . . . .	E. T. Cresson.
<i>Recorder and Conservator</i> , . . . . .	Henry Skinner.
<i>Secretary</i> , . . . . .	Frank Haimbach.
<i>Publication Committee</i> , . . . . .	C. W. Johnson, J. H. Ridlings.

HENRY SKINNER,  
*Recorder.*



## THE BOTANICAL SECTION.

During the year much progress has been made in the arrangement of the Herbarium, the collections now being in better condition and more readily accessible than ever before.

The erection of new cases in the centre of the south herbarium room has resulted in the rearrangement of all the flowering plants, thus relieving the congested condition of many of the cases.

The large case containing seeds, etc., formerly in the south room, has been moved to the north gallery room, where it is readily accessible to any one desiring to study its contents.

Over 18,000 sheets have been added to the collection during the year, acquired principally by purchase and exchange, although many liberal donations have been received.

These include the herbarium of the late Dr. Charles Schaeffer, containing his collections for many seasons in the British Columbia region, presented by Mrs. Mary S. Schaeffer; and the gift by Dr. Ida A. Keller of her entire herbarium, including a number of plants from Europe.

Smaller collections were received from Mr. Charles S. Williamson, from the eastern United States; Mr. Benjamin H. Smith, from south Florida; the United States National Museum and Messrs. Witmer Stone, E. G. Vanatta, Dr. Campbell E. Waters, Edward Potts, Henry S. Conard, and the Conservator. These are noted in detail in the *Additions to the Museum*.

The Section has purchased a collection of 178 sheets of Washington plants from Mr. Henry S. Conard, and 365 sheets of California plants from Mr. A. A. Heller, the collections of the past season, containing many novelties.

The important collection made by Mr. Herbert H. Smith in the Santa Marta region of Colombia has been purchased by the Academy, and numbers 2,500 sheets; also the West African collections of Dr. Pritzel, numbering 1,776 sheets, and the herbarium of Alexander MacElwee, acquired through purchase and exchange, numbering approximately 10,000 sheets, a considerable proportion of which are mounted.

The Academy's expeditions added 450 sheets, as follows:

Thomasville, Georgia, 50 sheets, collected by Mr. J. A. G. Rehn; Cuba and southern Florida, 125 and 25 respectively, collected by Dr. H. A. Pilsbry, and from the Florida keys, 250 sheets, collected by the Conservator.

All the specimens received have been poisoned, and a considerable number mounted and distributed through the Herbarium.

The series of field excursions conducted during April and early May by the Conservator were largely attended.

Much assistance was rendered during the year to students and visiting botanists desiring to consult the collections.

The Philadelphia Botanical Club has continued to hold its meetings during the year, its members having contributed over 400 sheets to the local Herbarium, which collection has been placed in excellent condition through the unremitting labors of Mr. Samuel S. Van Pelt.

At the meeting of the Section held December 13, 1904, the following were elected as officers for the ensuing year:

<i>Director</i> , . . . . .	Mr. Benjamin H. Smith.
<i>Vice-Director</i> , . . . . .	Mr. Joseph Crawford.
<i>Recorder</i> , . . . . .	Dr. Ida A. Keller.
<i>Secretary</i> , . . . . .	Mr. John T. Pennypacker.
<i>Treasurer and Conservator</i> , . . . . .	Stewardson Brown.

Respectfully submitted,

STEWARDSON BROWN,  
*Conservator.*

#### THE ORNITHOLOGICAL SECTION.

The ornithological collections of the Academy were never in better condition nor more accessible to the student than at present.

During the past year three additional exhibition cases have been erected in the new gallery, permitting the transfer of the entire series of Raptorial birds, as well as the Pigeons. The rearrangement and labelling of the former group has been completed and many duplicate specimens not required for exhibition have been arranged in the study series. At the present time only the Passerine and Picarian birds remain in the old building, and the majority of these will be transferred next year.

Thirteen additional tin storage cases and ten wooden cases have been provided for the accommodation of the study collection, greatly facilitating the arrangement of many groups, especially the birds of prey, and providing needed space for the numerous accessions.

The Conservator has examined practically all the large bird skins during the year, and carefully rearranged the old unmounted material which has been listed to facilitate consultation.

Many important additions have been made to the collection, fore-

most among which is a series of 360 Philippine birds purchased by the Academy; a handsome collection of mounted Humming-birds, the gift of Calvin Pardee, Esq., and collections from the West Indies, Colorado and California, presented respectively by Dr. J. Percy Moore, Robert T. Young and W. O. Emerson.

The Delaware Valley Ornithological Club has continued to hold its meetings at the Academy, and has done much to stimulate ornithological study. The collections have been largely consulted during the year, and considerable assistance has been rendered to visiting ornithologists.

The Conservator would acknowledge valuable assistance in the care of the collections to Mr. Paul L. Lorrilliere.

At the annual meeting of the Section, held December 19, 1904, the following officers were elected:

<i>Director,</i>	.	.	.	.	.	Spencer Trotter, M.D.
<i>Vice-Director,</i>	.	.	.	.	.	George S. Morris.
<i>Secretary,</i>	.	.	.	.	.	William A. Shryock.
<i>Recorder,</i>	.	.	.	.	.	Stewardson Brown.
<i>Treasurer and Conservator,</i>	.	.	.	.	.	Witmer Stone.
						WITMER STONE, <i>Conservator.</i>

The annual election of Officers, Councillors and Members of the Committee on Accounts to serve during 1905 was held with the following result:

PRESIDENT,	.	.	.	.	.	Samuel G. Dixon, M.D.
VICE-PRESIDENTS,	.	.	.	.	.	Arthur Erwin Brown, E. G. Conklin, Ph.D.
RECORDING SECRETARY,	.	.	.	.	.	Edward J. Nolan, M.D.
CORRESPONDING SECRETARY,	.	.	.	.	.	J. Percy Moore, Ph.D.
TREASURER,	.	.	.	.	.	George Vaux, Jr.
LIBRARIAN,	.	.	.	.	.	Edward J. Nolan, M.D.
CURATORS,	.	.	.	.	.	Arthur Erwin Brown, Samuel G. Dixon, M.D. Henry A. Pilsbry, Sc.D. William S. Vaux, Jr.

COUNCILLORS TO SERVE THREE YEARS,	Thomas H. Fenton, M.D. Edwin S. Dixon, John Cadwalader, William Sellers.
COMMITTEE ON ACCOUNTS, . . . .	Charles Morris, Samuel N. Rhoads, Dr. C. Newlin Peirce, John G. Rothermell, Howard Crawley.
COUNCILLOR TO SERVE FOR UNEXPIRED TERM OF TWO YEARS, . . . .	Frederick Prime.

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## COUNCIL FOR 1905.

*Ex-officio.*—Samuel G. Dixon, M.D., Edwin G. Conklin, Ph.D., Arthur Erwin Brown, Edward J. Nolan, M.D., J. Percy Moore, Ph.D., George Vaux, Jr., Henry A. Pilsbry, Sc.D., and William S. Vaux, Jr.

*To serve Three Years.*—Thomas Fenton, M.D., Edwin S. Dixon, John Cadwalader and William Sellers.

*To serve Two Years.*—Dr. C. Newlin Peirce, Philip P. Calvert, Ph.D., Thomas Biddle, M.D., and Frederick Prime.

*To serve One Year.*—Thomas A. Robinson, Charles B. Penrose, M.D., Charles Morris, Isaac J. Wistar.

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CURATOR OF MOLLUSCA, . . . .	Henry A. Pilsbry, Sc.D.
ASSISTANT LIBRARIAN, . . . .	William J. Fox.
ASSISTANTS TO THE CURATORS, . . . .	Witmer Stone, Henry Skinner, M.D., Stewardson Brown, J. Percy Moore, Ph.D., Edward G. Vanatta, Henry W. Fowler, J. A. G. Rehn, H. Newell Wardle.
TAXIDERMIST, . . . . .	David McCadden.
<i>Jessup Fund Students,</i> . . . .	H. Newell Wardle, J. A. G. Rehn, Paul L. Lorrilliere.

*Janitors,* . . . . . Charles Clappier,  
Daniel Heckler,  
James Tague,  
Jacob Aebley.

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### ELECTIONS DURING 1904.

#### MEMBERS.

*January 19.*—Harold Sellers Colton, James K. Clarke, Walter B. Smith, William Morgan, Gilbert Van Ingen, Frank P. Hendley.

*March 15.*—Henry Tucker, M.D., Waldemar Lee.

*April 19.*—Everett F. Phillips, Herbert Guy Kribs, Henry R. M. Landis, M.D.

*May 17.*—Henry D. Jordan, M.D., James Harold Austin.

*October 18.*—Mrs. Charles Roberts, M. F. McDonough, Charles D. Hart, M.D.

#### CORRESPONDENTS.

*October 18.*—Frantisek Vijdovsky, of Prague; A. A. W. Hubrecht, of Utrecht.

## ADDITIONS TO THE MUSEUM.

## ARCHÆOLOGY.

- BISHOP MUSEUM (in exchange). A collection of tapa cloths, Hawaiian Islands.  
H. W. HAND. A piece of tapa cloth.  
ALLEN IRWIN. Collection of boomerangs, Solomon Island spears, shield, etc.  
CLARENCE B. MOORE. Numerous specimens from the Florida mounds.  
MRS. CHARLES SCHÄFFER. Collection of Indian baskets, etc., and Chilkat blanket.  
LT. FREDERICK SCHÖBER. Twenty-two lots of archæological specimens, Samoa, Alaska, Japan, etc.  
MRS. JAMES M. WILLCOX. Indian vessel, mound at Mecklenberg, Va.

## MAMMALS.

- JACOB ASCHENBRAND. Mounted Fox Terrier.  
W. E. HUGHES, M.D. Little Chief Hare (*Ochotona princeps*), Idaho.  
P. L. LORILLIERE. Muskrat (*Fiber zibethicus*), Collingdale, Pennsylvania.  
CHARLES J. PENNOCK. Six Muskrats, Delaware.  
R. A. F. PENROSE, JR. Mounted Jack Rabbit.  
PURCHASED. Five skins and skulls of *Oryzomys palustris*, Salem county, New Jersey; three Deer, two Peccaries and several skulls, from Mexico.  
PURCHASED (for mounting). Puma (*Felis concolor orconensis*), two Musk Oxen (*Ovibos moschatus wardi*), three Mountain Sheep (*Ovis canadensis cremnobates*), one Mindoro Buffalo (*Bubalis mindorensis*), male Bison (*Bison bison*).  
J. A. G. REHN (Academy Expedition to Georgia). Two skins and skulls of *Lepus floridanus*, Thomasville, Georgia.  
SAMUEL N. RHODES. Two black Muskrats (*Fiber zibethicus*), Audubon, New Jersey.  
MRS. CHARLES SCHÄFFER. Human skeleton, mounted.  
MRS. CHARLES SCHÄFFER (on deposit). Collection of mounted heads of mammals and two skins.  
E. G. VANATTA. Four skulls of Muskrats (*Fiber zibethicus*), Chestertown, Maryland.  
C. S. WELLES. Deer Mouse (*Peromyscus leucopus*), Delaware county, Pennsylvania.  
ZOOLOGICAL SOCIETY OF PHILADELPHIA. Specimens prepared as follows: Mounted: Flat-headed Cat (*Felis planiceps*), Cat Squirrel (*Sciurus niger*), Long-tailed Poreupine (*Hystrix longicaudata*), Spotted Dasyure (*Dasyurus maculatus*), Common Dasyure (*D. viverrinus*), Prong-horned Antelope young (*Antilocapra americana*), African Buffalo (*Bos caffer aquinoctialis*). To be mounted: Kangaroo (*Macropus robustus*), *Sceloporus* sp., Thick-tailed Gallago (*Gallago crassicaudata*), MongOOSE Lemur (*Lemur mongoz*), Sambur Deer (*Rusa unicolor*). Skin

and skull: Two Vulpine Phalangers (*Trichosurus vulpecula*), Texan Wild Cat (*Lynx rufus texensis*), Stanley's Chevrotain (*Tragulus stanleyanus*), Spotted Chevrotain (*Tragulus memmina*), Binturong (*Arctictis binturong*), Siberian Marmot (*Arctomys bobac*), young Puma (*Felis concolor*), Indian Antelope (*Antelope cervicapra*), Kangaroo Rat (*Dipodomys* sp.), Deer Mouse (*Peromyscus texanus*). Skin and skeleton: Female Bison (*Bison bison*), Formosan Macaque (*Macacus cyclopes*), two Rocky Mountain Goats (*Oreamnos montanus*), skull of young Bison (*Bison bison*), skin of Black Bear (*Ursus americanus*), skeleton of Antelope (*Antilocapra americana*). Alcoholic: Echidna (*Tachyglossa aculeata*), young Vulpine Phalanger (*Trichosurus vulpecula*), young Pig-tailed Macaque (*Macacus nemestrinus*), young Kangaroo (*Macropus robustus*).

### BIRDS.

E. ALLEN. Wood Thrush (*Hylocichla mustelina*).

C. B. MOORE (collected by S. BROWN and H. W. FOWLER). Skins of *Centurus carolinus* and *Ardea occidentalis*.

W. O. EMERSON. Seventy-five skins of Californian birds.

W. E. HUGHES, M.D. Two skins of *Dendroica caerulea* and two of *Buteo lineatus*, Choptank Mills, Delaware.

WILLIAM M. MEIGS. Two skins of Caracara from Florida.

J. PERCY MOORE. Collection of bird skins from Jamaica and Bahamas.

CALVIN PARDEE. A collection of mounted Humming-birds and a Lyre-bird.

C. J. PENNOCK. Three Grebes (*Podilymbus podiceps*), Delaware.

PURCHASED. Three hundred and seventy skins of Philippine birds.

CARLOS S. REED. Two bird's eggs, Chili.

J. A. G. REHN (Academy Expedition to Georgia). Collection of bird skins, Thomasville, Georgia.

MRS. CHARLES SCHÄFFER. Collection of mounted birds.

MRS. F. SCHICK. Case of mounted birds.

A. B. VAN DER WEILEN. Four skins of Wyoming birds.

JOSEPH WILLCOX. Skin of White-tailed Kite (*Elanus leucurus*).

ROBERT T. YOUNG. Fifteen bird skins, Boulder, Colorado.

ZOOLOGICAL SOCIETY OF PHILADELPHIA. Skins of the following: *Pternistes leucoscepus*, *Cereopsis nova-hollandia*, *Cissa chinensis*, *Anser anser*, *Trupialis superciliosus*, *Zonotrichia leucophrys*, *Icterus bullocki*, *Ajaia ajaia*, *Dryonastes chinensis*, *Anthropoides virgo*, *Euphonia lanirostris*.

### REPTILES.

ALBERT ALBER. Horned Toad (*Phrynosoma blainvilliei*).

WILLIAM M. BEECKLEY. *Tantilla coronata*, Florida.

MRS. P. P. CALVERT. Rattlesnake and House Snake swallowing Water Snake, Pennsylvania.

H. C. CHAPMAN, M.D. Specimens of *Menobranchius* and *Siren*.

OTTO EGGELING. Two *Chondrotes tenebrosus*, Felton, Santa Cruz county, California.

H. W. FOWLER. Snapping Turtle (*Chelydra serpentina*), Holmesburg, Philadelphia.

H. W. FOWLER and THOMAS D. KEIM. Several reptiles, Port Alleghany, Pennsylvania.

W. E. HUGHES, M.D. Two specimens of Skinks (*Eumeces fasciatus*).

CHARLES LEBY. *Phrynosoma blainvillei*.

CARLOS S. REED. Two specimens of batrachians, Chili.

J. A. G. REHN (Academy Expedition to Georgia). Collection of reptiles and batrachians, Thomasville, Georgia.

ZOOLOGICAL SOCIETY OF PHILADELPHIA. Two spiny soft-shelled Turtles (*Aspidonectes spinifer*), *Zamenis mucosus*, *Viper* sp., *Crotalus scutulatus*, Rough-eyed Caiman (*C. sclerops*), *Varanus bengalensis*.

#### FISHES.

CHARLES C. ABBOTT, M.D. Jar of fishes from the vicinity of Trenton, N. J.

CAPTAIN E. E. BATES. *Hippocampus*, Key West, Florida.

DR. BERGEN. Gold Fish.

C. B. MOORE (collected by S. Brown and H. W. Fowler). Collection of fishes, Florida Keys.

H. C. CHAPMAN, M.D. *Hippocampus*.

JAMES K. CLARKE. Jar of fishes from Florida.

H. W. FOWLER. Collections of fishes, Holmesburg, Philadelphia; Crosswicks Creek, New Jersey; Neshaminy Falls and Kennett Square, Pennsylvania. Collection of breeding Suckers. Collection of marine fishes, Grassy Sound, New Jersey. Series of fresh-water fishes, Chadd's Ford, Pennsylvania.

H. W. FOWLER and THOMAS D. KEIM. Six jars of fishes, Port Alleghany, Pennsylvania.

H. W. FOWLER and WITMER STONE. Collection of fishes from Speedwell, New Jersey.

WILLIAM FRIEDERICKS. Gold Fish.

ASA HODGKINS. Jaws of a Shark (*Lamna cornutum*), Bar Harbor, Maine.

PHILIP LAURENT. Three dried fishes.

LELAND STANFORD UNIVERSITY. Large series of Japanese fishes.

WILLIAM E. MEEHAN. Five Sticklebacks.

PETREL FISHING COMPANY. A collection of fishes from Nantucket.

C. P. RAY, JR. Jar of fishes.

J. A. G. REHN (Academy Expedition to Georgia). Collection of fishes, Thomasville, Georgia.

C. SCHMALZRIED. Gold Fish.

BENJAMIN SHARP, M.D. Jar of gobioid fishes, Swatow, China.

E. I. SIMPSON. Two fishes, Salem, New Jersey.

VISITOR. Burr Fish, Atlantic City, N. J.

H. T. WOLF. Two jars of fishes, Dingman's Ferry, Pennsylvania; Moor Gold Fish.

#### MOLLUSCA.

HELEN ABBOTT. Fifteen species of land and fresh-water shells from Lake Minnetonka, Minnesota.

JOHN A. ALLEN. Fifty-nine trays of land and fresh-water shells from Maine and Ohio.



REV. E. H. ASHMUN. Seven species of land shells from Arizona, Idaho and Mexico.

F. C. BAKER. Six species of *Lymnaea* and a *Testacella* from Illinois.

P. BARTSCH. *Polygyra hopetonensis* Shutt. from Brighton, Virginia.

C. E. BEECHER. Forty-nine sets of fresh-water shells.

C. R. BIEDERMAN. Four species of land and fresh-water shells from Arizona.

A. C. BILLUPS. *Pyramidula alternata* Say from Calhoun Falls, South Carolina.

STEWARTSON BROWN. Two species of land shells from York county, Pennsylvania.

F. W. BRYANT. *Physa virgata* Gld. from Lakeside, California.

OWEN BRYANT. *Vitrea lucida* Drap. from the Botanical Garden, Bermuda.

H. C. CHAPMAN, M.D. *Mya arenaria* L. and *Purpura lapillus* L. from Bar Harbor, Maine.

T. D. A. COCKERELL. Five species of mollusca from California and New Mexico.

GEORGE H. CLAPP. Fifty-one sets of land shells from Alabama.

O. COLLETT. Twenty-five jars of land shells from Ceylon.

H. S. COLTON. Thirty-one lots of marine shells from Mt. Desert, Maine.

ANNIE P. COPE. Two species of *Muricidae* from Flint Island.

W. H. DALL, M.D. *Lymnaea atkinsi* Dall from Alaska and six species of *Cerion* from Bermuda.

L. E. DANIELS. Fifteen trays of American *Pisidium* and seven species of other American land and fresh-water shells.

C. ABBOTT DAVIS. Thirty-seven sets of Bermuda shells.

I. N. DE HAVEN. *Oreohelix cooperi* W. G. B. from Yellowstone Park.

S. G. DIXON, M.D. Three species of *Polygyra* and *Pyramidula* from Cranberry, North Carolina.

J. H. FERRISS. One hundred and forty trays of land shells from Arizona and New Mexico.

W. H. FLUCK. Four species of marine shells from Nicaragua.

DR. GRABHAM. Thirty-one lots of land and marine shells from Madeira.

H. A. GREEN. Two species of *Polygyra* from Tryon, North Carolina.

R. E. GRIFFITH, M.D. Four species of marine shells.

G. K. GUDE. Four species of Asiatic land shells.

A. GULICK. Twelve trays of fossil land shells from Bermuda.

MRS. FRANK GUPTIL. *Odostomia impressa* Say and two other marine shells from Osprey, Florida.

MISS A. C. HARTSHORNE. One hundred and three trays of Japanese shells.

H. HEATH. One jar of *Cymbulioopsis vitrea* Heath from Monterey Bay, California.

MORGAN HEBARD. Seven species of land shells from Key West, Florida, and Nassau, New Providence.

J. B. HENDERSON, JR. Three species of *Urocoptis* from Haiti and Jamaica.

JUNIUS HENDERSON. Thirty-one lots of land and fresh-water shells from Colorado.

A. A. HINKLEY. Eighty-five sets of fresh-water shells from Alabama.

Y. HIRASE. Six hundred and forty-one species of Japanese land and marine shells.

WILLIAM E. HUGHES, M.D. *Polygyra ptychophora* from the Bitter Root Mountains, Idaho.

- P. W. JARVIS. Seventy-eight trays of Jamaican *Urocoptis*.  
C. W. JOHNSON. *Anoma radiata* Chitty from Jamaica.  
T. D. KEIM and H. W. FOWLER. Seventeen species of land and fresh-water shells from McKean county, Pennsylvania.  
IDA A. KELLER, PH.D. Two species of marine shells from New Jersey.  
R. J. KIRKLAND, M.D. Twenty-six trays of *Pisidium* from Michigan.  
C. M. LATOURETTE. *Limax maximus* L. from Oak Lane, Pennsylvania.  
HERBERT N. LOWE. One Chiton.  
D. N. MCCADDEN. *Fulgur perversum* L. from Stone Harbor, New Jersey.  
MRS. M. C. W. MERRIHEW. Three species of *Muricidae* from Newport, California, in exchange.  
THOMAS H. MONTGOMERY, JR., PH.D. Eleven species of land and fresh-water shells from Austin, Texas.  
CLARENCE B. MOORE. Three hundred and thirty lots of shells from the Florida Keys and adjacent mainland, including one hundred and fourteen collected by Messrs. Brown and Fowler.  
A. E. ORTMAN. Two species of fresh-water shells from Western Pennsylvania.  
GEORGE A. PHILLIPS, M.D. *Zirphæa crispata* L., in alcohol from Bar Harbor, Maine.  
H. A. PILSBRY, SC.D. Two hundred and seventy trays of shells from Florida.  
GEORGE PINE. Two lots of *Unio* and *Ampullaria* from Florida.  
JOHN PONSONBY. *Dorcasia* and *Coptocheilus* in alcohol.  
EDW. POTTS. Twenty-three trays of marine shells from Tarpon Springs, Florida, collected by W. Beeckley.  
PRINCETON PATAGONIAN EXPEDITION. Fifty-seven species of marine and fresh-water shells.  
PURCHASED. A set of *Polygyra vannostrandii* Bland from Aiken, South Carolina; three hundred and thirty-nine trays of Californian shells, collected by H. Hemphill; large collection of land and fresh-water shells from Alabama.  
P. B. RANDOLPH. Three slugs from Alaska.  
C. PAUL RAY, JR. Six species of land and fresh-water shells from Sparrow Lake, Canada.  
J. A. G. REHN (Academy Expedition to Georgia). Three species of land and fresh-water shells from Thomasville, Georgia.  
S. N. RHOADS. Thirty-five trays of land and fresh-water shells from Delaware and Mexico.  
JOHN RITCHIE, JR. Eight species of land and fresh-water shells from Nevada, Mauritius and Japan.  
S. RAYMOND ROBERTS. One specimen of *Ampullaria* and a *Hyalea* from Japan.  
MRS. T. E. RUGGLES. *Nacella mytilina* Helb.  
WILLIAM P. SEAL. *Planorbis magnificus* Pils. from Wilmington, North Carolina.  
C. T. SIMPSON. *Pleurodonta gigantea* Scop. from Haiti.  
MISS RUTH SPENCER. *Goniobasis proxima* Say from Green River, North Carolina.  
DR. V. STERKI. Eleven trays of *Pisidium*.  
CURWEN STODDART, JR. *Polinices heros* Say from Prout's Neck, Maine.  
REV. H. H. THOMAS. Nine species of land and marine shells from New Jersey and New York (in exchange).

E. G. VANATTA. *Philomycus carolinensis* Bose. from New Garden, Pennsylvania.

T. VAN HYNING. Twenty-one sets of land and fresh-water shells from Des Moines, Iowa.

H. L. VIERECK. *Arca* and *Planorbis* from Connecticut and North Carolina.

BRYANT WALKER. Eighteen trays of *Pisidium* and sixteen other fresh-water shells from the Eastern States.

REV. W. H. WEBSTER. *Calliostoma pellucidum* Val., Devonport, New Zealand.

H. W. WENZEL. Four *Polygyra* from Pennsylvania and New Jersey.

JOSEPH WILLCOX. Forty-nine trays of shells from North Carolina and Florida.

H. T. WOLF. Five species of land and fresh-water shells from Dingman's Ferry, Pennsylvania.

### INSECTS.

AUSTRALIAN MUSEUM. Sixty-seven Orthoptera (exchange).

C. F. BAKER. Eighty-six Orthoptera, California, Nicaragua.

W. J. BAUMGARTNER. Three Orthoptera, Illinois.

W. M. BEECKLEY. One Hemiptera, one Orthoptera, Florida.

C. R. BEIDERMAN. Two thousand five hundred insects, Arizona (purchased).

W. L. BLATCHLEY. Ninety-four Orthoptera, Indiana, Florida.

W. E. BRITTON. Thirteen Hemiptera, Connecticut.

P. P. CALVERT. Six Lepidoptera, Pennsylvania; ten Hymenoptera, Africa.

D. M. CASTLE. Five Coleoptera, Florida; four Hymenoptera.

J. D. CHANDLER. Four Coleoptera.

T. D. A. COCKERELL. Fourteen Orthoptera, Colorado; one Hemiptera, New Mexico; *Kermes gillettei* type, Colorado.

E. DAECKE. One Lepidoptera, New Jersey; one gall, New Jersey; two Diptera, New Jersey; ten Lepidoptera, Germany.

E. DIETRICH. Two hundred and seventy-four Orthoptera, Philippines (purchased).

S. G. DIXON. Three Lepidoptera, Pennsylvania.

CHARLES DURY. Four Coleoptera, Ohio.

SIGMUND GRAENICHER. Twenty Hymenoptera, Wisconsin.

G. M. GREENE. Four Coleoptera, Pennsylvania.

F. HAIMBACH. Four Diptera, Philadelphia.

R. V. HARVEY. Twenty-seven Hymenoptera, Colombia.

M. HEBARD. Two Lepidoptera, Michigan; two hundred and seventy-four Orthoptera, North America; two hundred and eleven Orthoptera, Georgia, Florida.

Y. HIRASE. Three hundred and twenty-five Orthoptera, Japan; four hundred and thirty-one Orthoptera, Loo Choo Islands (purchased).

H. HORNIG. Five Lepidoptera, New Jersey.

W. D. HUNTER. Twenty-five Coleoptera, Texas.

LOUIS JACKSON. One Orthoptera, Philadelphia.

UNIVERSITY OF KANSAS. Sixteen Orthoptera.

W. D. KEARFOOT. Forty Lepidoptera, United States.

P. LAURENT. One Lepidoptera, Philadelphia.

J. F. McCLENDON. One thousand Hymenoptera from Mexico (purchased); six hundred and forty-six insects from Mexico.

- MARIAN MACKENZIE. One Lepidoptera, Cuba.  
 W. M. MEIGS. Five Lepidoptera, Florida.  
 L. W. MENGEL. Nine Lepidoptera, East Indies.  
 L. NAVAS. Eighty-two Odonata, Spain.  
 W. D. PIERCE. One Coleoptera, Nebraska.  
 H. A. PILSBRY. Ten insects, Cuba.  
 C. S. REED. Three hundred and forty-two Orthoptera, Chili (purchased); sixty-two insects, Chili.  
 J. A. G. REHN. Two thousand insects, Georgia (Academy expedition); one Coleoptera, Philadelphia.  
 WIRT ROBINSON. Twenty-four insects, Cuba.  
 HENRI DE SAUSSURE. Seven hundred and sixty-seven Orthoptera, Mundus.  
 CHARLES SCHÄFFER. Three Coleoptera, Texas.  
 E. A. SCHWARZ. One Coleoptera, Arizona.  
 W. J. SEAL. Twenty-five Diptera, New Jersey.  
 F. SHARPLESS. Two insects, South America.  
 HENRY SKINNER. Fifteen Lepidoptera, New Jersey; nineteen Lepidoptera, British Columbia.  
 B. H. SMITH. Ninety-six insects, Florida.  
 WITMER STONE. One Orthoptera, Pennsylvania.  
 H. L. VIERECK. One Diptera, New Jersey.  
 H. W. WENZEL. One hundred and three Coleoptera, Pennsylvania; seventeen Lepidoptera, New Jersey; two Coleoptera, New Jersey.  
 JOSEPH WILLCOX. Thirty-six insects, Florida; twenty-five insects, Pennsylvania.  
 J. D. WINDSOR. Ten Hymenoptera, Pennsylvania.  
 H. J. WOLF. Fifteen insects, United States.

#### OTHER INVERTEBRATES.

- HELEN ABBOTT. *Helicopsyche arenifera*, Lake Minnetonka, Minnesota.  
 JOHN A. ALLEN. *Cypris*, Nesqually, Washington.  
 CAPT. E. E. BATES. *Palinurus*, Key West, Florida.  
 FRANCIS BEECKLEY. *Limulus*, Tarpon Springs, Florida.  
 WILLIAM M. BEECKLEY. *Spiroboleus marginatus*, Florida.  
 C. BIEDERMAN. One bottle *Allolobophora*.  
 H. C. CHAPMAN, M.D. Three parasitic Worms, two vials of parasitic Nematodes.  
 H. W. FOWLER. *Macrobdella decora*, Trenton, New Jersey; *Ascaris* and *Placobdella*; *Cambarus bartoni* and *robustus*, Port Alleghany, Pennsylvania.  
 G. M. GRAY. *Autolytus cornutus*.  
 MISS A. C. HARTSHORNE. Two lots of Crustacea, Sagami, Japan.  
 JUNIUS HENDERSON. *Helicopsyche arenifera*, Colorado.  
 T. H. MONTGOMERY, JR., PH.D. *Sabellaria*, Florida.  
 J. P. MOORE. Forty-five bottles of Polychæta, fifty-seven bottles of Nereidæ, ninety-three bottles of Leeches.  
 CLARENCE B. MOORE. Twelve lots of invertebrates from Florida Keys, collected by Messrs. Brown and Fowler.  
 MISS CAROLINE W. MURPHY. Starfish, Point Pleasant, New Jersey.

A. E. ORTMAN. Collection of Crawfish.

CHARLES B. PENROSE, M.D. Four species of Nematodes and Cestodes, two parasites.

H. A. PILSBRY. Nineteen lots of invertebrates from the United States and Cuba.

EDWARD POTTS. Scorpion and *Siphostoma fuscum*, Florida; collection of mounted slides of fresh-water slides, being the types of his species.

MAJ. ROBERT P. ROBINS. Two glass Sponges, Philippines.

MRS. CHAS. SCHÄFFER. Collection of microscopical slides.

JAMES TAGUE. *Phagocata gracilis*, Philadelphia.

H. A. LINVILLE. *Placobdella rugosa*.

U. S. FISH COMMISSION. Four bottles of Polyhæta, including co-types of three species, several bottles of Serpulidæ and *Pæcilasma kaempferi*.

H. L. VIERECK. Two specimens of *Nautilograpsus minutus*, Cape May, New Jersey.

B. WALKER. *Rhynchodemus*, Michigan.

JOSEPH WILLCOX. *Nereis*, Florida; *Erpobdella punctata*, Little Sarasota Bay, Florida.

#### FOSSIL INVERTEBRATES.

R. E. GRIFFITH, M.D. A set of Pentremites.

FRANK J. KEELEY. A specimen of rock containing bones and shells from Durham Furnace, Pennsylvania.

A. L. McDONALD. Thirty-six trays of fossils from St. Joseph, Missouri (in exchange).

T. VAN HYNING. *Polygyra albolabris* Say from a deposit opposite Fort Madison, Iowa.

JOSEPH WILLCOX. *Polygyra carpenteriana* in rock from Manatee county, Florida, and *Mitra carolinensis* Conr. from Duplin county, North Carolina.

LEWIS WOOLMAN. Fifteen fossils from United States and England.

#### VERTEBRATE FOSSILS.

HARVEY J. MITCHELL. Fossil fish remains.

#### PLANTS.

AMERICAN PHILOSOPHICAL SOCIETY (on deposit). Collections of plants from the herbaria of Muhlenberg, Barton, Lewis and Clarke, Short, Pursh, Baldwin, Mary Forest, and five volumes marked *Herbarium Britannicum* by G. Don, and *Herbarium Americanum*, 1795, all received in 1897, and one package of Muhlenberg Mosses, received in 1904.

BOTANICAL SECTION. One hundred and seventy-eight Washington plants, three hundred and sixty-five Californian plants.

STEWARTSON BROWN. One hundred and fifty species, Pennsylvania and New Jersey.

HENRY S. CONARD. *Artemisia gnaphaloides*.

CAMPBELL E. WATERS, Ph.D. Fifty sheets of ferns.

IDA A. KELLER, PH.D. One thousand five hundred sheets of plants in case.

EDWARD POTTS. Flowers of *Grevillea robusta*.

PURCHASED. H. H. Smith collection, two thousand five hundred sheets, from Santa Marta, Colombia; Alexander McElwee herbarium, ten thousand sheets, mainly North America.

JOHN T. REEDER. *Agaricus* from mine at Calumet, Michigan.

MRS. CHARLES SCHÄFFER. One thousand plants from British Columbia, herbarium of Dr. Charles Schaeffer.

BENJAMIN H. SMITH. One hundred and eighty-eight Florida plants and two European species.

WITMER STONE. Twenty-nine species from Choptank Mills, Delaware, and fifty-eight sheets of local Violets.

U. S. NATIONAL MUSEUM. Forty-three sheets of Fungi, Williams collection.

E. G. VANATTA. Sixty-five species of Maryland plants.

C. S. WILLIAMSON. Two hundred and seventy-two North American plants.

REV. MILTON WALDO. Distorted branch of Water Beech.

J. A. G. REHN (Academy expedition to Georgia). Fifty sheets.

H. A. PILSBRY (Academy expedition to Cuba). One hundred and forty-eight sheets.

STEWARTSON BROWN (Clarence B. Moore expedition to Florida). Two hundred and fifty sheets.

#### MINERALS, ETC.

MRS. E. J. BARTOL. Piece of flexible Sandstone.

HARRY T. CARSON. Mineral specimen.

S. G. DIXON, M.D. Magnetic Iron Ore, Cranberry, North Carolina.

FRITZ GLEIM. Specimens of Pyrite, Elba, Italy.

M. E. GRIFFITH. Several specimens of minerals.

JOHN T. REEDER. Specimens of native sheet Copper, Calumet, Michigan.

JOSEPH C. ROOP. Water from phosphorescent lake in Bahamas.

MRS. CHARLES SCHÄFFER. Collections of minerals and rocks.

GEORGE VAUX, JR. Ores from silver mines of British Columbia.

WM. S. VAUX COLLECTION. A number of specimens purchased.

VISITOR. Chrysocolla, Arizona.



